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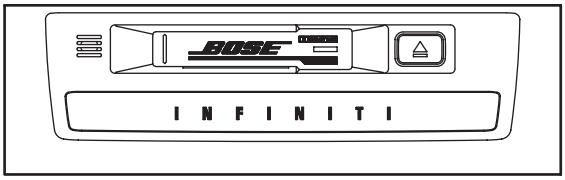
Service Manual



NISSAN Automobile Genuine
AM/FM Radio Cassette Stereo

Model PN-1740B
(Genuine No.28115 CR900)
(ID No.CK080)

Model PN-1740K
(Genuine No.28115 AR260)
(ID No.CK100)

SPECIFICATIONS

Radio section

Tuning system:	PLL Frequency synthesizer system	
Receive range:		
	AM	530kHz to 1,710kHz
	FM	87.9MHz to 107.9MHz
Intermediate frequency:		
	AM	450 +3/-3kHz
	FM	10.7 +0.2/-0.2MHz
Quieting sensitivity:	AM	Less than 37dBu (at 20dB S/N)
	FM	Less than 15dBu (at 30dB S/N)
Separation:	FM	More than 22 +5/-7dB(1kHz)
Auto tuning stop sensitivity:		
	AM	41 +6/-6dBu (at 1000kHz,1400kHz)
	FM	32 +6/-6dBu

Tape section

Reproducting system:	4 track 2 program 2 channel stereo system
Wow and flutter:	Less than 0.15%(W.R.M.S)
Separation:	More than 35dB
Cross talk:	More than 45dB
S/N ratio:	Normal tape(120us) More than 47dB(DOLBY B NR off) More than 55dB(DOLBY B NR on) Metal tape(70us) More than 49dB(DOLBY B NR off) More than 57dB(DOLBY B NR on)
FF/REW time:	Less than 110sec.(C-60)

General

Load impedance:	4 ohm x4
Power output:	15W x4
Power supply voltage:	DC13.2V(10.8V to 15.6V) Negative ground
Consumptive current:	Less than 10A(MAX)
Dimensions(mm):	184(W) x56(H) x160(D)
Weight:	approx. 1.4kg

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

* Specifications and design are subject to change without notice for further improvement.

COMPONENTS

PN-1740B-A/PN-1740K-A

Main unit	----------	1

NOTE

* We cannot supply PWB with component parts in principle. When a circuit on PWB has failure,please repair it by component parts base. Parts which are not mentioned in service manual are not supplied.

To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
   The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.
   The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.
   For proper circuit construction, use of insulation tubes, bonding,gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.
   If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.
3. Check for safety after repair.
   Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots.
   If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to the parts for the automobile.
   Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
5. Cautions regarding chips.
   Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.
6. Cautions in handling flexible PWB
   Before working with a soldering iron, make sure that the iron tip temperature is around 270℃. Take care not to apply the iron tip repeatedly(more than three times)to the same patterns. Also take care not to apply the tip with force.
7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

ADJUSTMENTS

This unit is not include control switching block so that used the special adjustment jig for measuring.

Switch of diversity

* How to fix the MAIN channel.
  While holding the buttons of M1 and M3, turn on the power switch of the jig.
* How to fix the SUB channel.
  While holding the buttons of M4 and M6, turn on the power switch.
* To release the MAIN or SUB channel, turn off the power switch.

Item	Procedure	Measuring instrument
FM noise convergence	MAIN channel 1. Connect to the jig and fix the MAIN channel to make the unit the test mode. 2. Radio is set to 98.1MHz in up down of the jig. 3. Set the output to 0dBm(0.775V) by main volume. 4. Input the 98.1MHz/55dBu(1kHz, 30% MOD, 22.5kHz Div.) SSG signal. 5. Adjust the outputs to -24dB by VR103 when the SG output is set to -20dBu. SUB channel 1. Fix the SUB channel and follow the same adjustment steps as MAIN above. 2. Adjust the outputs to -19dB by VR101 when the SG output is set to -20dBu.	SSG Milli-volt meter
FM SD	1. Input the 98.1MHz/32dBu(1kHz, 30% MOD, 22.5kHz Div.) signal. 2. Adjust the output of TP101 to become just high level with VR102.	SSG Oscilloscope
Dolby level	1. Insert a Dolby level test tape(400Hz, 200nWb/m). 2. Adjust VR1(R)/VR2(L) so that an output of TP1(L)/TP2(R) is 300mV +1/-1dB.	Milli volt meter

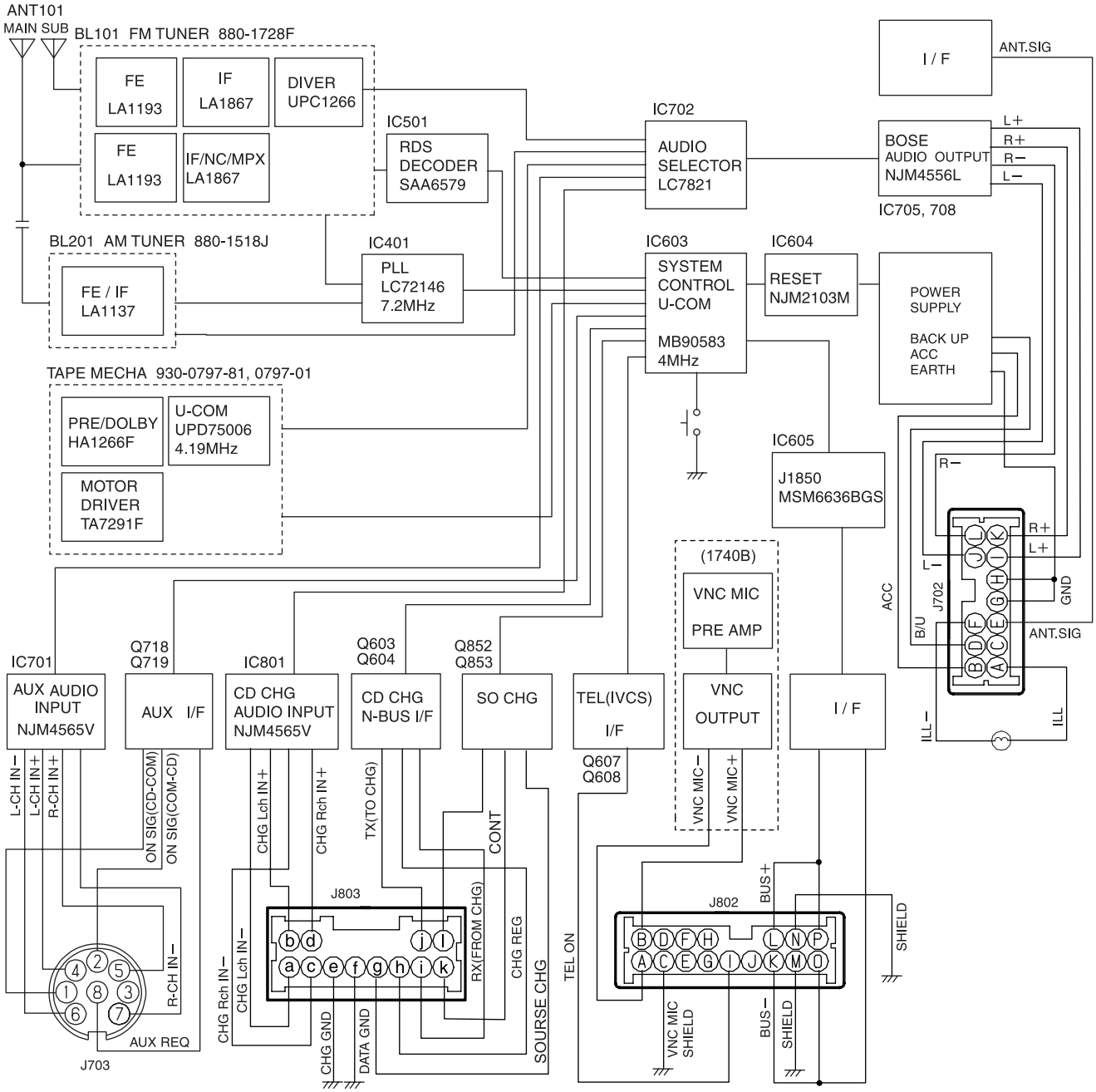
EXPLANATION OF IC

052-3160-21 MB90583CPFV-G-132 System Controller

1.Terminal Description

pin 1: INT 0 : IN : The initial setting input.
pin 2: NU : - : Not in use.
pin 3: NU : - : Not in use.
pin 4: NU : - : Not in use.
pin 5: NU : - : Not in use.
pin 6: TAPE RESET : O : The reset signal output to the tape mechanism.
pin 7: J1850 ALE : O : Address latch output to SAE-J1850 communication protocol conformity transmission controller.
pin 8: J1850 RD : IN : Read enable signal input from SAE-J1850 communication protocol conformity transmission controller.
pin 9: GND : - : Ground.
pin 10: J1850 WR : IN : Write enable signal input from SAE-J1850 communication protocol conformity transmission controller.
pin 11: DISC IND : O : ON command output to the indicator for "DISC".
pin 12: J1850 RESET : O : Reset pulse output to SAE-J1850 communication protocol conformity transmission controller.
pin 13: J1850 CS : O : Chip select output to SAE-J1850 communication protocol conformity transmission controller.
pin 14: NDS REQ 1 : IN : NDS request signal input.
pin 15: NDS REQ 2 : IN : NDS request signal input.
pin 16: NU : - : Not in use.
pin 17: NU : - : Not in use.
pin 18: NU : - : Not in use.
pin 19: C-BUS SI : IN : C-BUS serial data in.
pin 20: C-BUS SO : O : C-BUS serial data out.
pin 21: VDD : - : Positive supply voltage.
pin 22: C-BUS CLK : O : C-BUS clock out.
pin 23: CD RESET : O : The reset pulse output to the CD IC.
pin 24: C-BUS SRQ : IN : C-BUS SRQ.
pin 25: CNNCT C : - : Connect the capacitor.
pin 26: NDS SIG CHG : O : Analog signal changing command output for NDS.
pin 27: NDS DAT CHG : O : Digital data changing command output for NDS.
pin 28: VDD : - : Positive supply voltage.
pin 29: GND : - : Ground.
pin 30: NU : - : Not in use.
pin 31: NU : - : Not in use.
pin 32: VDD : - : Positive supply voltage.
pin 33: VDD : - : Positive supply voltage.
pin 34: GND : - : Ground.
pin 35: GND : - : Ground.
pin 36: NDS CHG SI : IN : NDS serial data input.
pin 37: NDS CHG SO : O : NDS serial data output.
pin 38: NU : - : Not in use.
pin 39: NU : - : Not in use.
pin 40: GND : - : Ground.
pin 41: C-BUS RESET : O : C-BUS reset out.
pin 42: C-BUS SET : O : C-BUS set out.
pin 43: NU : - : Not in use.
pin 44: NU : - : Not in use.
pin 45: TAPE EJECT : IN : Tape eject signal input.
pin 46: RDS CLK : IN : RDS clock pulse input.
pin 47: MC MODE 0 : IN : Micro computer mode select input.
pin 48: MC MODE 1 : IN : Micro computer mode select input.
pin 49: MC MODE 2 : IN : Micro computer mode select input.
pin 50: HSTXI : - : HSTX input.
pin 51: J1850 INT : IN : Interrupt command input from SAE-J1850 communication protocol conformity transmission controller.
pin 52: ACC ON IN : IN : ACC detection signal input.
pin 53: IVCS ON : IN : IVCS ON.
pin 54: NU : - : Not in use.
pin 55: NU : - : Not in use.
pin 56: VDD DET : IN : VDD detection signal input.
pin 57: DI : IN : The serial data input.
pin 58: DO : O : The serial data output.
pin 59: Clock Out : O : Clock Out.
pin 60: CEO : O : Chip enable output.
pin 61: RDS DATA : IN : RDS serial data input.
pin 62: NU : - : Not in use.
pin 63: NU : - : Not in use.
pin 64: NU : - : Not in use.
pin 65: NU : - : Not in use.
pin 66: NU : - : Not in use.
pin 67: NU : - : Not in use.
pin 68: RESET : O : Reset signal output.
pin 69: ANT ON : O : Antenna ON command output.
pin 70: NU : - : Not in use.
pin 71: NU : - : Not in use.
pin 72: NU : - : Not in use.
pin 73: AMP ON : O : Audio power amplifier ON signal output.
pin 74: AF MUTE : O : Audio frequency signal muting.
pin 75: RESET : IN : Reset signal input.
pin 76: SYS ON : O : System ON signal output.
pin 77: X1A : - : The crystal connection.
pin 78: X0A : - : The crystal connection.
pin 79: GND : - : Ground.
pin 80: X0 : - : The crystal connection.
pin 81: X1 : - : The crystal connection.
pin 82: VDD : - : Positive supply voltage.
pin 83: J1850 D 0 : I/O : Data input/output for SAE-J1850 communication protocol conformity transmission controller.
pin 84: J1850 D 1 : I/O : Data input/output for SAE-J1850 communication protocol conformity transmission controller.
pin 85: J1850 D 2 : I/O : Data input/output for SAE-J1850 communication protocol conformity transmission controller.
pin 86: J1850 D 3 : I/O : Data input/output for SAE-J1850 communication protocol conformity transmission controller.
pin 87: J1850 D 4 : I/O : Data input/output for SAE-J1850 communication protocol conformity transmission controller.
pin 88: J1850 D 5 : I/O : Data input/output for SAE-J1850 communication protocol conformity transmission controller.
pin 89: J1850 D 6 : I/O : Data input/output for SAE-J1850 communication protocol conformity transmission controller.
pin 90: J1850 D 7 : I/O : Data input/output for SAE-J1850 communication protocol conformity transmission controller.
pin 91: NU : - : Not in use.
pin 92: NU : - : Not in use.
pin 93: NU : - : Not in use.
pin 94: NU : - : Not in use.
pin 95: NU : - : Not in use.
pin 96: NU : - : Not in use.
pin 97: NU : - : Not in use.
pin 98: NU : - : Not in use.
pin 99: NU : - : Not in use.
pin100: IF MUTE : O : IF muting output.

BLOCK DIAGRAM



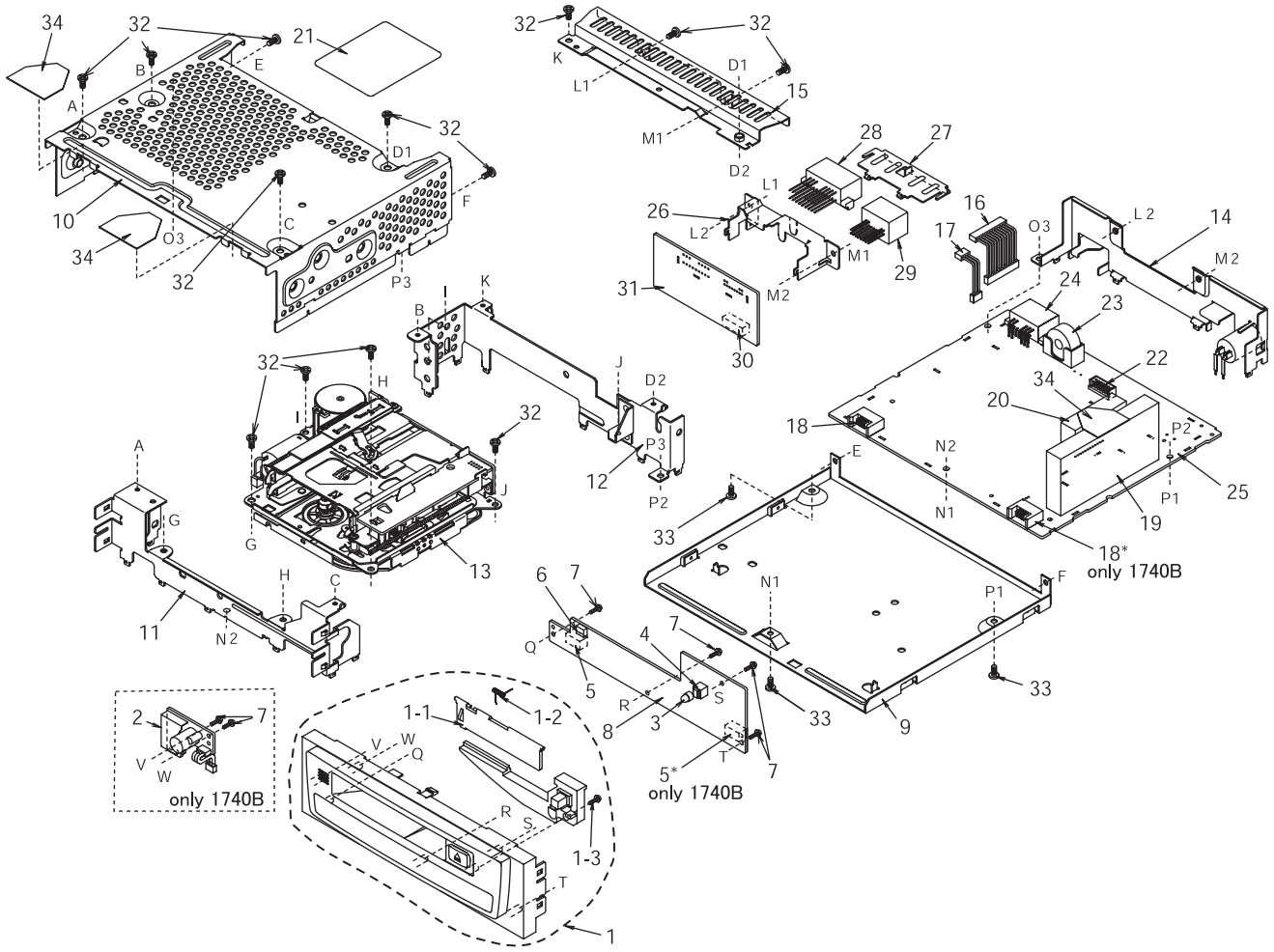
EXPLODED VIEW/PARTS LIST

Main section

Note)Several different parts of the same reference number are alternative parts.
One of those parts is used in the set.
Some parts depend on each model.The model name is specified in the description.

NO.	PART NO.	DESCRIPTION	Q'TY
1	940-7944-42 940-7944-52	ESCUTCHEON ASSY(1740B) ESCUTCHEON ASSY(1740K)	1
1-1	320-0457-48 320-0457-49	DUSTPROOF COVER(1740B) DUSTPROOF COVER(1740K)	1
1-2	750-2626-00	SPRING	1
1-3	716-0778-00	WAVE SCREW(2 x6)	1
2	948-0602-00	MIC ASSY(1740B)	1
3	017-0420-33 017-0420-26	14V40mA P.LAMP ORG.(1740B) 14V40mA P.LAMP BLU.(1740K)	1 1
4	013-3934-02	SWITCH	1
5	074-1151-06 074-1151-06	OUTLET SOCKET 6P(1740B) OUTLET SOCKET 6P(1740K)	2 1
6	076-0526-03	PLUG(3P)	1

NO.	PART NO.	DESCRIPTION	Q'TY
7	716-0778-00 716-0778-00	WAVE SCREW 2 x6(1740B) WAVE SCREW 2 x6(1740K)	6 4
8	039-1826-00	SWITCH PWB (WITHOUT COMPONENT)	1
9	311-1758-02	LOWER CASE	1
10	310-1663-01	UPPER CASE	1
11	309-0732-01	FRONT PLATE	1
12	331-2471-20	MECHANISM BRACKET	1
13	930-0797-81	TAPE MECHANISM 930-0797-01	1
14	331-3040-10	REAR PLATE W/ANT PLUG	1
15	307-0672-00	REAR COVER	1
16	854-4457-01	EXTENSION LEAD(12P)	1



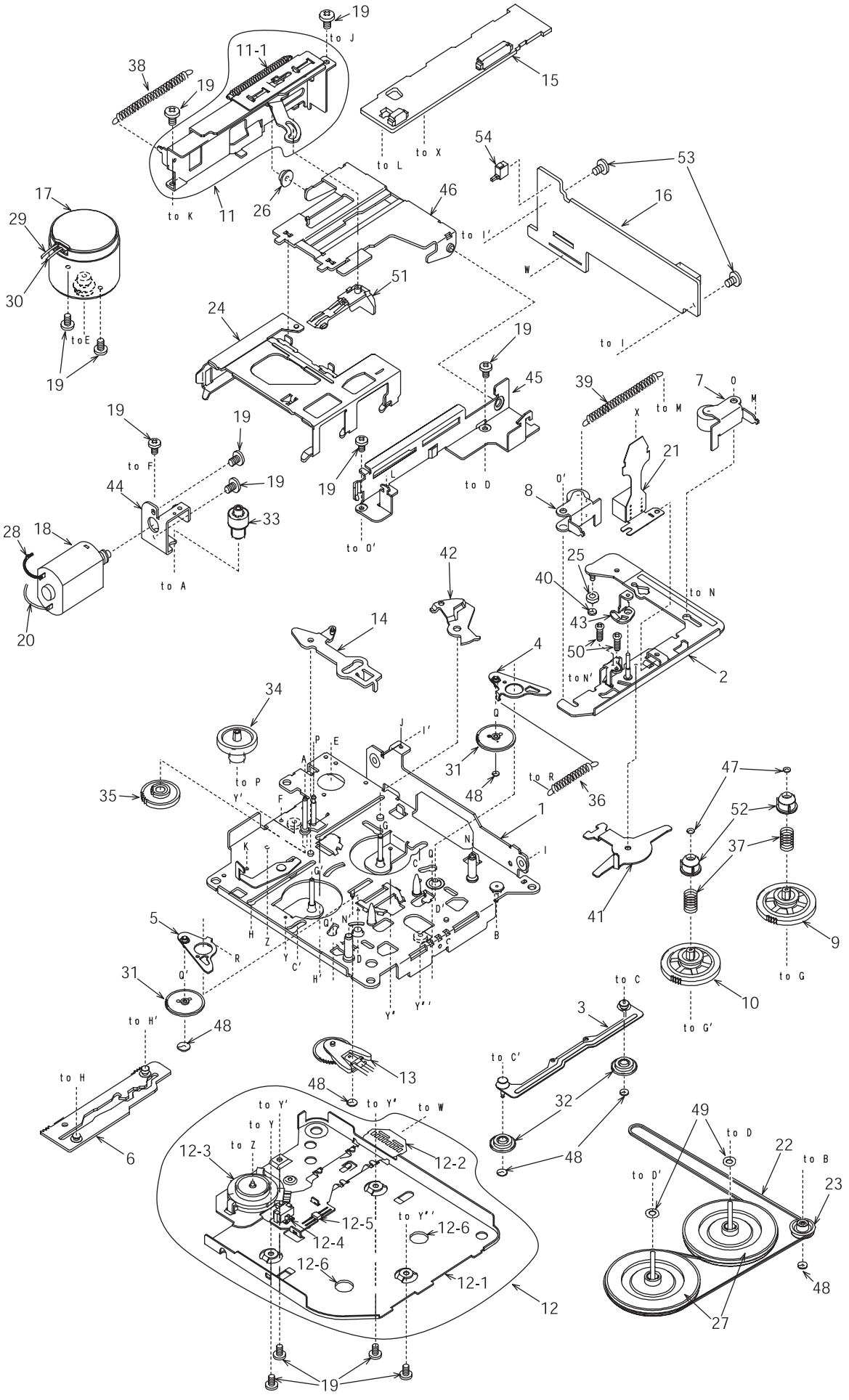
NO.	PART NO.	DESCRIPTION	Q'TY
17	854-4458-00	EXTENSION LEAD(3P)	1
18	076-0540-06 076-0540-06	PLUG 6P(1740B) PLUG 6P(1740K)	2 1
19	880-1728F	TUNER PACK(FM)	1
20	880-1518J	TUNER PACK(AM)	1
21	286-9233-34 286-9233-35	SETPLATE(1740B) SETPLATE(1740K)	1
22	076-0368-18	PLUG(18P)	1
23	010-8028-00	COIL	1
24	074-1284-00	OUTLET SOCKET	1
25	039-2221-00	MAIN PWB (WITHOUT COMPONENT)	1

NO.	PART NO.	DESCRIPTION	Q'TY
26	331-3041-00	OUTLET HOLDER A	1
27	331-3042-00	OUTLET HOLDER B	1
28	074-1268-10	OUTLET SOCKET	1
29	074-1013-30	OUTLET SOCKET	1
30	074-0898-18	OUTLET SOCKET(18P)	1
31	039-2222-00	SUB PWB (WITHOUT COMPONENT)	1
32	714-2606-81	MACHINE SCREW(M2.6 x6)	13
33	716-1494-00	IT SCREW(M2.6 x6)	3
34	347-6521-00	SHIELD PART	3

Tape mechanism section

NO.	PART NO.	DESCRIPTION	Q'TY
1	960-4294-22	DECK PLATE ASSY	1
2	960-4261-20	HEAD PLATE ASSY	1
3	960-4262-03	FF/REW-P-ASSY	1
4	960-4263-03	IDLER-P-ASSY F	1
5	960-4264-03	IDLER-P-ASSY R	1
6	960-4266-05	MODE PLATE ASSY	1
7	960-4269-05	ROLLER ASSY F	1
8	960-4270-05	ROLLER ASSY R	1
9	960-4348-03	REEL ASSY F	1
10	960-4349-03	REEL ASSY R	1
11	960-4389-03	EJECT SUB ASSY	1
11-1	750-3020-01	SWITCH PLATE SPRING	1

NO.	PART NO.	DESCRIPTION	Q'TY
12	960-4338-09	BOTTOM SUB ASSY	1
12-1	960-4295-02	BOTTOM-P-ASSY	1
12-2	099-9926-01	FLEXIBLE PWB (WITHOUT COMPONENT)	1
12-3	013-3951-32	SWITCH(MODE)	1
12-4	013-3953-01	SWITCH(METAL)	1
12-5	051-1776-00	IC	1
12-6	746-0767-00	WASHER	2
13	960-4282-06	DETECT SUB ASSY	1
14	960-4301-02	PLAY LINK ASSY	1
15	039-1365-00	SIDE PWB (WITHOUT COMPONENT)	1
16	990-0698-00	REAR PWB ASSY (WITH COMPONENT)	1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NO.	PART NO.	DESCRIPTION	Q'TY
17	SMA-178-100	MAIN MOTOR ASSY	1
18	SMA-177-100	POWER MOTOR ASSY	1
19	716-0484-00	SCREW(M2 x2.5)	13
20	809-4914-60	WIRE(WHT)	1
21	011-0328-01	HEAD	1
22	602-0118-00	BELT	1
23	604-0046-00	TENSION PULLEY	1
24	606-0093-07	PACK GUIDE	1
25	610-0342-01	HEAD-P-ROLLER	1
26	610-0343-00	GUIDE-A-ROLLER	1
27	611-0091-02	FLYWHEEL	2
28	806-4914-60	WIRE(BLU)	1
29	802-4911-60	WIRE(RED)	1
30	800-4911-60	WIRE(BLK)	1
31	613-0662-00	IDLER GEAR	2
32	613-0286-03	FF/REW GEAR	2
33	613-0288-01	HELICAL GEAR	1
34	613-0289-01	GEAR A	1
35	613-0337-00	POWER GEAR	1

NO.	PART NO.	DESCRIPTION	Q'TY
36	750-3017-02	IDLER-P-SPRING	1
37	750-2949-00	SLIDE SPRING	2
38	750-2947-02	EJECT-P-SPRING	1
39	750-2946-02	PINCH SPRING	1
40	746-0762-00	WASHER	1
41	630-2597-01	CHANGE LINK	1
42	630-2598-05	EJECT LINK	1
43	630-2600-01	ADJUST LINK	1
44	630-2601-02	MOTOR PLATE	1
45	630-2626-06	PWB FRAME	1
46	630-2642-01	GUIDE ARM	1
47	746-0761-00	WASHER	2
48	746-0724-00	WASHER	6
49	746-0624-00	WASHER	2
50	716-0833-10	SCREW(M2 x5.6)	2
51	631-1992-02	PACK STOPPER	1
52	631-1993-01	SLIDE BUSH	2
53	716-1676-00	PWB SCREW(M2.6 x6)	2
54	013-3906-00	SWITCH(SPPB51)	1

■ELECTRICAL PARTS LIST

Note) Several different parts of the same reference number are alternative parts.
One of those parts is used in the set.
Some parts depend on each model.The model name isspecified in the description.

Sub PWB section(B1)

REF No.	PART No.	DESCRIPTION
C801	166-5096-50	5pF CH
C803	166-5096-50	5pF CH
C805	166-2201-50	22pF CH
C806	166-2201-50	22pF CH
C807	166-5096-50	5pF CH
C808	166-5096-50	5pF CH
C809	042-0562-67	16V10uF
C810	042-0562-67	16V10uF
C811	042-0562-67	16V10uF
C812	042-0562-67	16V10uF
C813	168-2222-55	2200pF(1740B)
C850	168-2222-55	2200pF
C851	168-2222-55	2200pF

REF No.	PART No.	DESCRIPTION
D850	001-0529-72	MA8200-M
D851	001-0529-72	MA8200-M
IC801	051-3020-90	NJM4565V
J801	074-0898-18	18P
J802	074-1268-10	16P
J803	074-1013-30	OUTLET SOCKET A12MW
Q850	125-2005-91	UN2211
Q851	125-0001-91	UN2111
Q852	125-2005-91	UN2211
Q853	125-0001-91	UN2111
R801	032-0106-64	1/10W 56k ohm D
R802	032-0106-64	1/10W 56k ohm D

REF No.	PART No.	DESCRIPTION
R803	032-0106-64	1/10W 56k ohm D
R804	032-0106-64	1/10W 56k ohm D
R805	032-0106-65	1/10W 100k ohm D
R806	032-0106-65	1/10W 100k ohm D
R807	032-0106-65	1/10W 100k ohm D
R808	032-0106-65	1/10W 100k ohm D
R809	119-3011-15	1/16W 300 ohm
R810	119-3011-15	1/16W 300 ohm
R850	111-8211-98	1/4W 820 ohm
R851	111-8211-98	1/4W 820 ohm
R852	111-8211-98	1/4W 820 ohm
R853	111-8211-98	1/4W 820 ohm

Main PWB section(B2)

REF No.	PART No.	DESCRIPTION
BL101	880-1728F	FM-TUNER
BL201	880-1518J	AM-TUNER
C102	043-0277-51	0.022uF
C103	168-1042-78	16V 0.1uF
C104	183-4763-39	16V47uF
C105	168-5632-78	16V 0.056uF
C106	168-5632-78	16V 0.056uF
C107	183-4763-39	16V47uF
C108	183-3363-29	10V33uF
C109	168-1042-78	16V 0.1uF
C111	168-3322-55	3300pF
C112	166-1011-50	100pF CH
C201	166-1511-50	150pF CH
C202	166-1007-50	10pF CH
C203	183-4763-39	16V47uF
C204	168-1042-78	16V 0.1uF
C226	168-4732-78	16V 0.047uF
C227	168-1042-78	16V 0.1uF
C229	168-8232-78	16V 0.082uF
C301	168-6832-78	16V 0.068uF
C302	168-1042-78	16V 0.1uF
C303	168-1042-78	16V 0.1uF
C401	183-2263-39	16V22uF

REF No.	PART No.	DESCRIPTION
C402	043-0277-51	0.022uF
C403	042-0458-90	50V1uF
C404	166-2201-50	22pF CH
C405	168-1022-55	1000pF
C406	166-2201-50	22pF CH
C407	166-1011-50	100pF CH
C408	168-1022-55	1000pF
C409	166-1011-50	100pF CH
C410	166-1011-50	100pF CH
C411	168-2232-55	0.022uF
C412	166-1011-50	100pF CH
C413	183-4763-19	6.3V47uF
C414	166-1501-50	15pF CH
C415	166-1801-50	18pF CH
C416	166-2201-50	22pF CH
C501	183-4763-19	6.3V47uF
C502	168-1042-78	16V 0.1uF
C503	168-5612-55	560pF
C504	168-1022-55	1000pF
C506	166-4701-50	47pF CH
C507	168-3312-55	330pF
C508	166-5601-50	56pF CH
C509	183-2253-69	50V2.2uF

REF No.	PART No.	DESCRIPTION
C510	168-1042-78	16V 0.1uF
C601	168-1022-55	1000pF
C602	168-2232-55	0.022uF
C603	168-1022-55	1000pF
C604	168-1022-55	1000pF
C605	168-1022-55	1000pF
C606	168-1042-78	16V 0.1uF
C607	168-1042-78	16V 0.1uF
C608	168-1022-55	1000pF
C609	168-1022-55	1000pF
C610	168-1042-78	16V 0.1uF
C611	168-1022-55	1000pF
C612	168-1022-55	1000pF
C613	166-2201-50	22pF CH
C614	168-1042-78	16V 0.1uF
C615	183-1073-19	6.3V100uF
C616	168-1022-55	1000pF
C617	166-1511-50	150pF CH
C618	166-1801-50	18pF CH
C619	168-1022-55	1000pF
C620	183-1053-69	50V1uF
C621	166-1511-50	150pF CH
C622	168-1042-78	16V 0.1uF

REF No.	PART No.	DESCRIPTION
C623	183-1063-39	16V10uF
C624	168-1022-55	1000pF
C626	168-1022-55	1000pF
C627	168-4712-55	470pF
C631	168-4712-55	470pF
C632	168-4712-55	470pF
C638	168-1022-55	1000pF
C713	042-0562-70	16V47uF
C714	042-0562-70	16V47uF
C715	042-0548-52	10V220uF
C716	042-0548-53	16V100uF
C717	168-1042-78	16V 0.1uF
C718	166-2201-50	22pF CH
C719	166-2201-50	22pF CH
C720	042-0548-53	16V100uF
C721	042-0562-70	16V47uF
C722	042-0562-70	16V47uF
C723	042-0562-67	16V10uF
C724	042-0562-67	16V10uF
C725	183-1053-69	50V1uF
C727	042-0563-65	10V220uF
C728	166-5601-50	56pF CH
C729	166-2201-50	22pF CH
C731	183-4753-59	35V4.7uF
C732	166-2201-50	22pF CH
C733	166-5601-50	56pF CH
C734	042-0562-70	16V47uF
C735	166-5601-50	56pF CH
C736	166-2201-50	22pF CH
C737	166-2201-50	22pF CH
C738	166-5601-50	56pF CH
C739	168-2222-55	2200pF
C740	168-2222-55	2200pF
C741	168-2222-55	2200pF
C742	168-2222-55	2200pF
C743	042-0563-65	10V220uF
C744	042-0563-65	10V220uF
C745	042-0563-65	10V220uF
C746	042-0563-65	10V220uF
C747	168-2222-55	2200pF
C748	172-1041-15	0.1uF
C749	042-0551-02	16V1000uF
C750	183-1063-39	16V10uF
C751	183-1053-69	50V1uF
C752	172-1041-15	0.1uF
C753	172-1041-15	0.1uF
C754	168-1022-55	1000pF
C755	168-1042-78	16V 0.1uF
C757	042-0562-86	50V1uF
C758	042-0562-86	50V1uF
C759	168-1022-55	1000pF
D601	001-0422-38	MTZJ36
D602	001-0529-44	MA8082-M
D603	001-0589-91	1SS145
D604	001-0589-91	1SS145
D606	001-0529-36	MA8062-H
D607	001-0529-36	MA8062-H
D638	001-0589-91	1SS145
D701	001-0529-48	MA8091-H
D702	001-0356-91	1SS184
D702	001-0354-91	MA152WK
D705	001-0466-90	S5688B
D706	001-0516-90	MA111
D706	001-0517-90	1SS355
D707	001-2015-00	RL253
D708	001-0466-90	S5688B
D709	001-0504-31	HZS6 A2L
D710	001-0330-90	1SS119
D710	001-0330-90	1SS133
D711	001-0294-90	1SS119
D711	001-0330-90	1SS133
FIL601	060-3113-93	NFM2112R13C221R
FIL602	060-3113-93	NFM2112R13C221R
IC401	051-6201-90	LC72146M

REF No.	PART No.	DESCRIPTION
IC501	051-4607-90	SAA6581T
IC601	051-7201-28	TC7W00FK
IC602	051-7203-48	SN74LV74APW
IC603	052-3160-20	MB90583-CPFV-G-132
IC604	051-0869-58	NJM2103M
IC605	051-6604-18	MSM6636BGS-AKR1
IC702	051-7704-08	LC7821M-TLM
IC703	051-3020-90	NJM4565V
IC704	051-3020-90	NJM4565V
IC705	051-1407-00	NJM4556AL
IC707	051-1292-90	NJM4565M-D
IC708	051-1407-00	NJM4556AL
J702	074-1284-00	12P
L101	010-2230-76	22uH
L102	010-2230-76	22uH
L103	010-2230-64	2.2uH
L202	010-2230-76	22uH
L401	010-2230-88	220uH
L501	010-2230-88	220uH
L602	010-2230-76	22uH
P701	076-0540-06	6P
P702	076-0540-06	6P(1740B)
P703	076-0368-18	18P
Q102	125-2005-91	UN2211
Q102	125-2004-92	RN1402
Q103	125-2005-91	UN2211
Q103	125-2004-92	RN1402
Q104	190-1298-00	2SA1298
Q105	125-2005-91	UN2211
Q105	125-2004-92	RN1402
Q106	190-1298-00	2SA1298
Q150	125-0001-91	UN2111
Q150	125-0002-92	RN2402
Q151	125-2005-91	UN2211
Q151	125-2004-92	RN1402
Q401	192-2712-51	2SC2712G,L
Q402	192-2712-51	2SC2712G,L
Q501	192-2712-00	2SC2712
Q501	193-0601-00	2SD601
Q601	125-2005-91	UN2211
Q601	125-2004-92	RN1402
Q602	192-2712-00	2SC2712
Q602	193-0601-00	2SD601
Q603	125-2005-91	UN2211
Q603	125-2004-92	RN1402
Q604	125-0001-91	UN2111
Q604	125-0002-92	RN2402
Q606	192-2712-00	2SC2712
Q606	193-0601-00	2SD601
Q607	125-0006-90	UN2110
Q607	125-9007-90	HN1C01F
Q608	125-2005-91	UN2211
Q608	125-2004-92	RN1402
Q609	190-1052-03	2SA1052C
Q610	192-2462-03	2SC2462C
Q638	192-2712-00	2SC2712
Q638	193-0601-00	2SD601
Q650	192-2712-00	2SC2712
Q650	193-0601-00	2SD601
Q651	192-2712-00	2SC2712
Q651	193-0601-00	2SD601
Q701	125-2005-91	UN2211
Q701	125-2004-92	RN1402
Q702	193-2118-00	2SD2118
Q703	193-1858-00	2SD1858
Q705	192-2712-00	2SC2712
Q705	193-0601-00	2SD601
Q706	125-2005-91	UN2211
Q706	125-2004-92	RN1402
Q707	190-1048-00	2SA1048
Q708	125-0001-91	UN2111
Q708	125-0002-92	RN2402

REF No.	PART No.	DESCRIPTION
Q709	191-0709-00	2SB709A
Q709	190-1037-00	2SA1037
Q710	191-0709-00	2SB709A
Q710	190-1037-00	2SA1037
Q711	193-1858-00	2SD1858
Q714	191-0709-00	2SB709A
Q714	190-1037-00	2SA1037
Q715	125-2005-91	UN2211
Q715	125-2004-92	RN1402
Q716	100-1359-00	2SA1359
Q750	125-0001-91	UN2111
Q750	125-0002-92	RN2402
Q751	125-2005-91	UN2211
Q751	125-2004-92	RN1402
R101	119-2221-15	1/16W 2.2k ohm
R102	119-4731-15	1/16W 47k ohm
R103	119-3321-15	1/16W 3.3k ohm
R105	119-1021-15	1/16W 1k ohm
R106	119-1021-15	1/16W 1k ohm
R107	119-2221-15	1/16W 2.2k ohm
R108	119-2221-15	1/16W 2.2k ohm
R109	119-1031-15	1/16W 10k ohm
R110	119-1031-15	1/16W 10k ohm
R111	119-2221-15	1/16W 2.2k ohm
R112	119-1041-15	1/16W 100k ohm
R113	119-3311-15	1/16W 330 ohm
R201	119-1031-15	1/16W 10k ohm
R210	119-2221-15	1/16W 2.2k ohm
R211	119-2221-15	1/16W 2.2k ohm
R401	119-2221-15	1/16W 2.2k ohm
R402	119-4721-15	1/16W 4.7k ohm
R403	119-2721-15	1/16W 2.7k ohm
R404	119-2221-15	1/16W 2.2k ohm
R406	119-3321-15	1/16W 3.3k ohm
R407	119-3321-15	1/16W 3.3k ohm
R408	119-4731-15	1/16W 47k ohm
R409	119-1031-15	1/16W 10k ohm
R501	119-0000-05	1/16W 0 ohm JW
R502	119-1021-15	1/16W 1k ohm
R503	119-1021-15	1/16W 1k ohm
R505	119-1031-15	1/16W 10k ohm
R506	119-1031-15	1/16W 10k ohm
R601	119-4721-15	1/16W 4.7k ohm
R602	119-5621-15	1/16W 5.6k ohm
R603	119-5621-15	1/16W 5.6k ohm
R604	119-2231-15	1/16W 22k ohm
R605	119-5631-15	1/16W 56k ohm
R606	119-5631-15	1/16W 56k ohm
R607	119-4731-15	1/16W 47k ohm
R608	119-1031-15	1/16W 10k ohm
R609	119-1031-15	1/16W 10k ohm
R610	119-1021-15	1/16W 1k ohm
R611	119-4721-15	1/16W 4.7k ohm
R612	119-5631-15	1/16W 56k ohm
R613	119-1031-15	1/16W 10k ohm
R614	119-1031-15	1/16W 10k ohm
R615	119-1031-15	1/16W 10k ohm
R616	119-1031-15	1/16W 10k ohm
R617	119-1031-15	1/16W 10k ohm
R618	119-4731-15	1/16W 47k ohm
R619	119-6821-15	1/16W 6.8k ohm
R620	119-4731-15	1/16W 47k ohm
R621	119-4731-15	1/16W 47k ohm
R622	050-0140-54	1/32W 1k ohm x4J
R623	119-4731-15	1/16W 47k ohm
R626	050-0140-54	1/32W 1k ohm x4J
R630	050-0140-54	1/32W 1k ohm x4J
R633	119-3301-15	1/16W 33 ohm
R634	119-4731-15	1/16W 47k ohm
R635	050-0140-54	1/32W 1k ohm x4J
R636	050-0140-54	1/32W 1k ohm x4J
R637	119-4721-15	1/16W 4.7k ohm
R638	119-5621-15	1/16W 5.6k ohm
R639	119-5631-15	1/16W 56k ohm

REF No.	PART No.	DESCRIPTION
R640	119-1031-15	1/16W 10k ohm
R644	050-0140-54	1/32W 1k ohm x4J
R649	050-0140-54	1/32W 1k ohm x4J
R650	119-1021-15	1/16W 1k ohm
R651	050-0140-59	1/32W 33 ohm x4J
R652	119-1021-15	1/16W 1k ohm
R653	119-1021-15	1/16W 1k ohm
R654	119-1021-15	1/16W 1k ohm
R655	050-0140-54	1/32W 1k ohm x4J
R660	119-3301-15	1/16W 33 ohm
R661	119-1021-15	1/16W 1k ohm
R664	119-4731-15	1/16W 47k ohm
R666	050-0140-54	1/32W 1k ohm x4J
R668	119-4731-15	1/16W 47k ohm
R671	119-4731-15	1/16W 47k ohm
R673	050-0140-59	1/32W 33 ohm x4J
R678	119-1041-15	1/16W 100k ohm
R680	050-0140-59	1/32W 33 ohm x4J
R681	119-1041-15	1/16W 100k ohm
R683	119-2231-15	1/16W 22k ohm
R684	119-1001-15	1/16W 10 ohm
R685	119-1031-15	1/16W 10k ohm
R686	111-3321-98	1/4W 3.3k ohm
R687	032-0092-90	1/10W 10k ohm F
R688	111-3321-98	1/4W 3.3k ohm
R689	119-1031-15	1/16W 10k ohm
R690	032-0092-91	1/10W 33k ohm F
R691	032-0092-68	1/10W 62k ohm F
R692	111-1001-98	1/4W 10 ohm
R693	111-1001-98	1/4W 10 ohm
R694	032-0092-79	1/10W 5.6k ohm F
R695	119-2231-15	1/16W 22k ohm
R696	119-1001-15	1/16W 10 ohm
R697	119-1041-15	1/16W 100k ohm
R705	119-4331-15	1/16W 43k ohm
R706	119-3331-15	1/16W 33k ohm
R707	119-1241-15	1/16W 120k ohm

REF No.	PART No.	DESCRIPTION
R710	119-1241-15	1/16W 120k ohm
R711	119-3331-15	1/16W 33k ohm
R712	119-4331-15	1/16W 43k ohm
R721	119-1041-15	1/16W 100k ohm
R722	119-1041-15	1/16W 100k ohm
R725	119-1041-15	1/16W 100k ohm
R726	119-1041-15	1/16W 100k ohm
R727	119-1041-15	1/16W 100k ohm
R728	119-1041-15	1/16W 100k ohm
R729	119-4731-15	1/16W 47k ohm
R730	119-4731-15	1/16W 47k ohm
R731	119-1041-15	1/16W 100k ohm
R732	119-1041-15	1/16W 100k ohm
R733	119-2231-15	1/16W 22k ohm
R736	119-8231-15	1/16W 82k ohm
R737	119-8231-15	1/16W 82k ohm
R738	111-3311-98	1/4W 330 ohm
R739	119-1031-15	1/16W 10k ohm
R740	119-4721-15	1/16W 4.7k ohm
R741	111-3301-98	1/4W 33 ohm
R742	119-5621-15	1/16W 5.6k ohm
R743	119-5621-15	1/16W 5.6k ohm
R744	119-1031-15	1/16W 10k ohm
R745	119-3321-15	1/16W 3.3k ohm
R746	119-4731-15	1/16W 47k ohm
R747	119-1031-15	1/16W 10k ohm
R748	119-4731-15	1/16W 47k ohm
R749	119-4731-15	1/16W 47k ohm
R750	119-1021-15	1/16W 1k ohm
R751	119-1021-15	1/16W 1k ohm
R752	119-4731-15	1/16W 47k ohm
R753	119-1001-15	1/16W 10 ohm
R754	119-2231-15	1/16W 22k ohm
R755	119-2231-15	1/16W 22k ohm
R756	119-1831-15	1/16W 18k ohm
R757	119-1041-15	1/16W 100k ohm
R760	119-2231-15	1/16W 22k ohm

REF No.	PART No.	DESCRIPTION
R761	119-1001-15	1/16W 10 ohm
R765	119-4731-15	1/16W 47k ohm
R766	119-4731-15	1/16W 47k ohm
R767	119-1001-15	1/16W 10 ohm
R768	119-2231-15	1/16W 22k ohm
R769	119-2231-15	1/16W 22k ohm
R770	119-1831-15	1/16W 18k ohm
R771	119-1041-15	1/16W 100k ohm
R772	119-4721-15	1/16W 4.7k ohm
R773	119-2231-15	1/16W 22k ohm
R774	119-1001-15	1/16W 10 ohm
R775	111-5691-98	1/4W 5.6 ohm
R776	111-5691-98	1/4W 5.6 ohm
R777	111-1221-98	1/4W 1.2k ohm
R778	111-1221-98	1/4W 1.2k ohm
R779	111-4721-98	1/4W 4.7k ohm
R780	111-1531-98	1/4W 15k ohm
R781	111-6801-98	1/4W 68 ohm(1740B)
R781	111-1501-98	1/4W 15 ohm(1740K)
R782	119-1031-15	1/16W 10k ohm
R783	111-1531-98	1/4W 15k ohm
R790	119-1031-15	1/16W 10k ohm
R791	119-1031-15	1/16W 10k ohm
R792	111-1021-98	1/4W 1k ohm
R793	119-0000-05	1/16W 0 ohm JW
SUP101	060-0122-20	DSP-141N-S00B
SUP102	060-0122-20	DSP-141N-S00B
VR101	012-5203-59	47k ohm
VR102	012-5203-56	10k ohm
VR103	012-5203-59	47k ohm
X401	061-1066-00	7.2MHz
X501	061-3013-00	4.33MHz
X601	060-1025-90	8.0MHz
X602	060-1506-50	CSTCC4.00MG0H6
X603	061-3506-90	10MHz

Switch PWB section(B3)

REF No.	PART No.	DESCRIPTION
J901	074-1151-06	6P
J902	074-1151-06	6P(1740B)

REF No.	PART No.	DESCRIPTION
P901	076-0526-03	3P(1740B)
PL901	017-0420-33	14V 40mA

REF No.	PART No.	DESCRIPTION
S901	013-3934-02	SKPCAH

Side PWB section(B4) : Tape mechanism

REF No.	PART No.	DESCRIPTION
C1	166-3311-09	330pF
C2	166-3311-09	330pF
C3	178-1232-78	0.012uF
C4	176-3311-59	330pF
C5	178-1232-78	0.012uF
C6	176-3311-59	330pF
C7	178-4732-78	0.047uF
C8	178-4732-78	0.047uF
C9	163-1053-60	50V1uF
C10	166-5611-09	560pF
C11	166-5611-09	560pF
C12	178-1042-78	0.1uF
C13	163-1073-31	16V100uF
C14	178-1042-78	0.1uF
C15	178-1042-78	0.1uF
C16	163-1063-30	16V10uF
C17	168-4722-05	4700pF
C18	168-1032-05	0.01uF
C19	163-2253-60	50V2.2uF
C20	178-1042-78	0.1uF
C21	163-2263-30	16V22uF
C22	178-1032-78	0.01uF
C23	163-1063-30	16V10uF
C24	163-3363-21	10V33uF
C25	178-1042-78	0.1uF
CN2	074-1225-14	14P
CN3	076-0478-53	3P

REF No.	PART No.	DESCRIPTION
CN4	076-0478-12	12P
D1	001-0528-43	MA8082-L
D2	001-0419-25	MA3100
D3	001-0419-24	MA3091
D4	001-0517-00	1SS355
IC1	051-1919-00	HA12166F
IC2	051-1014-05	TA7291F
IC3	052-4010-00	uPD75006GB-748-3B4
L1	010-2174-28	220uH
Q1	100-1213-00	2SA1213
Q2	125-2027-05	DTC143ZU
Q3	192-3072-00	2SC3072(B)
Q4	102-2859-15	2SC2859O
Q5	125-2027-01	DTC114EU
Q6	125-0021-91	DTA114EU
Q7	190-1242-00	2SA1242O,Y
Q8	125-2027-05	DTC143ZU
R1	119-1241-10	1/16W 120k ohm
R2	119-1241-10	1/16W 120k ohm
R3	117-1811-10	1/10W 180 ohm
R4	117-1131-10	1/10W 11k ohm
R5	117-1031-10	1/10W 10k ohm
R6	117-1241-10	1/10W 120k ohm
R7	119-3341-10	1/16W 330k ohm
R8	117-1811-10	1/10W 180 ohm
R9	119-1131-15	1/16W 11k ohm

REF No.	PART No.	DESCRIPTION
R10	032-0104-03	1/4W 1k ohm
R11	119-1531-10	1/16W 15k ohm
R12	032-0104-67	1/4W 1.2k ohm
R13	032-0104-67	1/4W 1.2k ohm
R14	117-1241-10	1/10W 120k ohm
R15	119-3341-10	1/16W 330k ohm
R16	119-1531-10	1/16W 15k ohm
R17	117-0000-00	1/10W 0 ohm JW
R18	117-1031-10	1/10W 10k ohm
R19	116-1031-10	1/8W 10k ohm
R20	117-1031-10	1/10W 10k ohm
R21	117-1031-10	1/10W 10k ohm
R22	032-0092-23	1/10W 18k ohm F
R23	119-1831-10	1/16W 18k ohm
R24	117-2231-10	1/10W 22k ohm
R25	117-3331-10	1/10W 33k ohm
R26	117-4731-10	1/10W 47k ohm
R27	032-0104-55	1/4W 10 ohm
R28	032-0104-55	1/4W 10 ohm
R29	032-0104-55	1/4W 10 ohm
R30	032-0104-55	1/4W 10 ohm
R31	032-0104-76	1/4W 620 ohm
R32	119-2231-10	1/16W 22k ohm
R33	117-2231-10	1/10W 22k ohm
R34	119-2231-10	1/16W 22k ohm
R35	119-2231-10	1/16W 22k ohm
R36	119-1841-10	1/16W 180k ohm

REF No.	PART No.	DESCRIPTION
R37	117-1241-10	1/10W 120k ohm
R38	032-0104-72	1/4W 33 ohm
R39	117-5611-10	1/10W 560 ohm
R40	117-4731-10	1/10W 47k ohm
R41	116-4711-10	1/8W 470 ohm
R42	119-2211-10	1/16W 220 ohm

REF No.	PART No.	DESCRIPTION
R43	119-1021-10	1/16W 1k ohm
R44	119-1051-10	1/16W 1M ohm
R45	032-0104-75	1/4W 4.7 ohm
R46	032-0104-75	1/4W 4.7 ohm
R47	032-0104-69	1/4W 1.5k ohm
R48	117-1031-10	1/10W 10k ohm

REF No.	PART No.	DESCRIPTION
R49	117-1031-10	1/10W 10k ohm
VR1	012-5123-06	10k ohm
VR2	012-5123-06	10k ohm
X1	060-1529-90	4.0MHz

Bottom PWB section(B5) : Tape mechanism

REF No.	PART No.	DESCRIPTION
IC2	051-1776-00	NJL5801K

REF No.	PART No.	DESCRIPTION
SW2	013-3953-01	CRO2

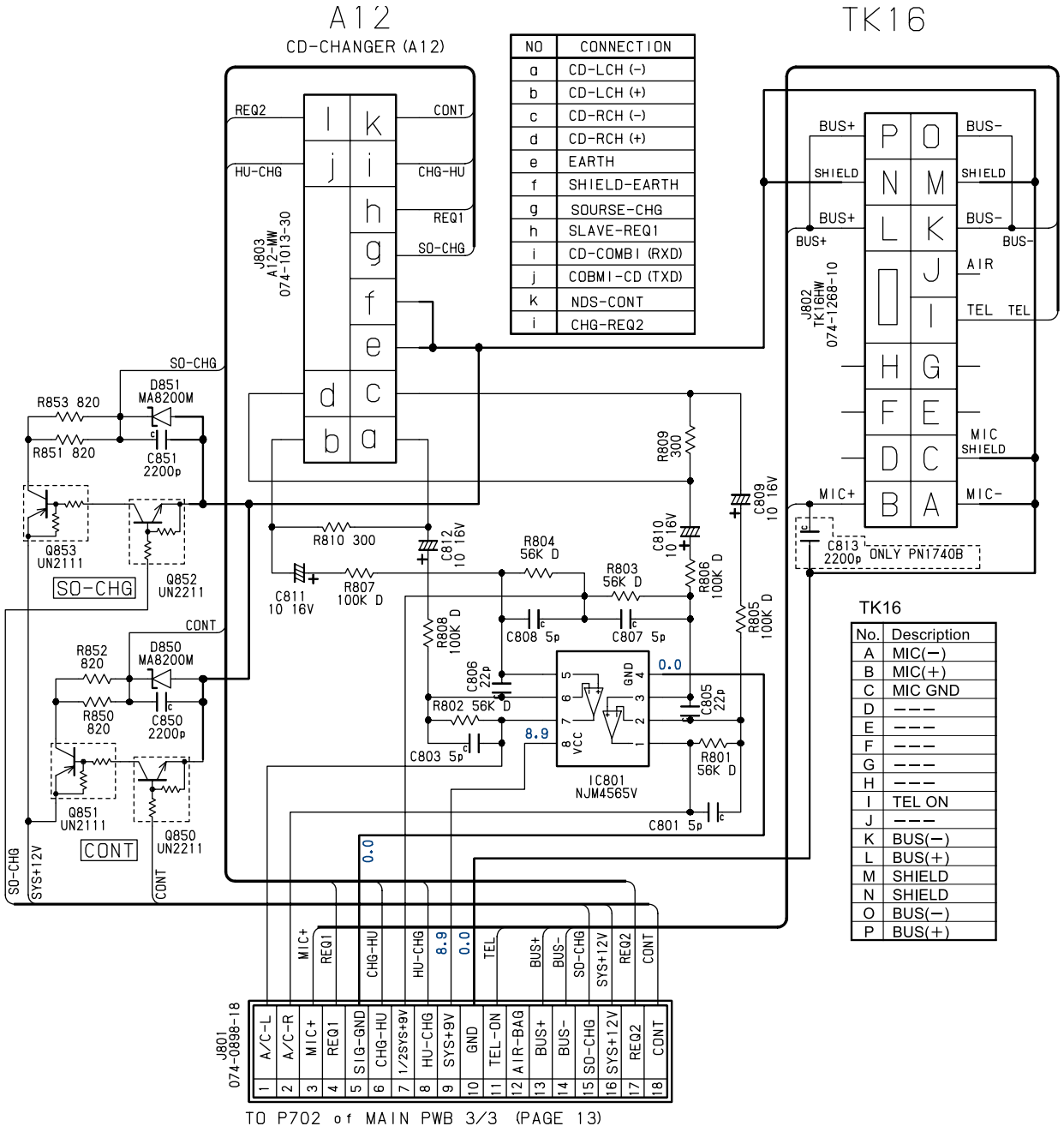
REF No.	PART No.	DESCRIPTION
SW3	013-3951-11	MODE

Rear PWB section(B6) : Tape mechanism

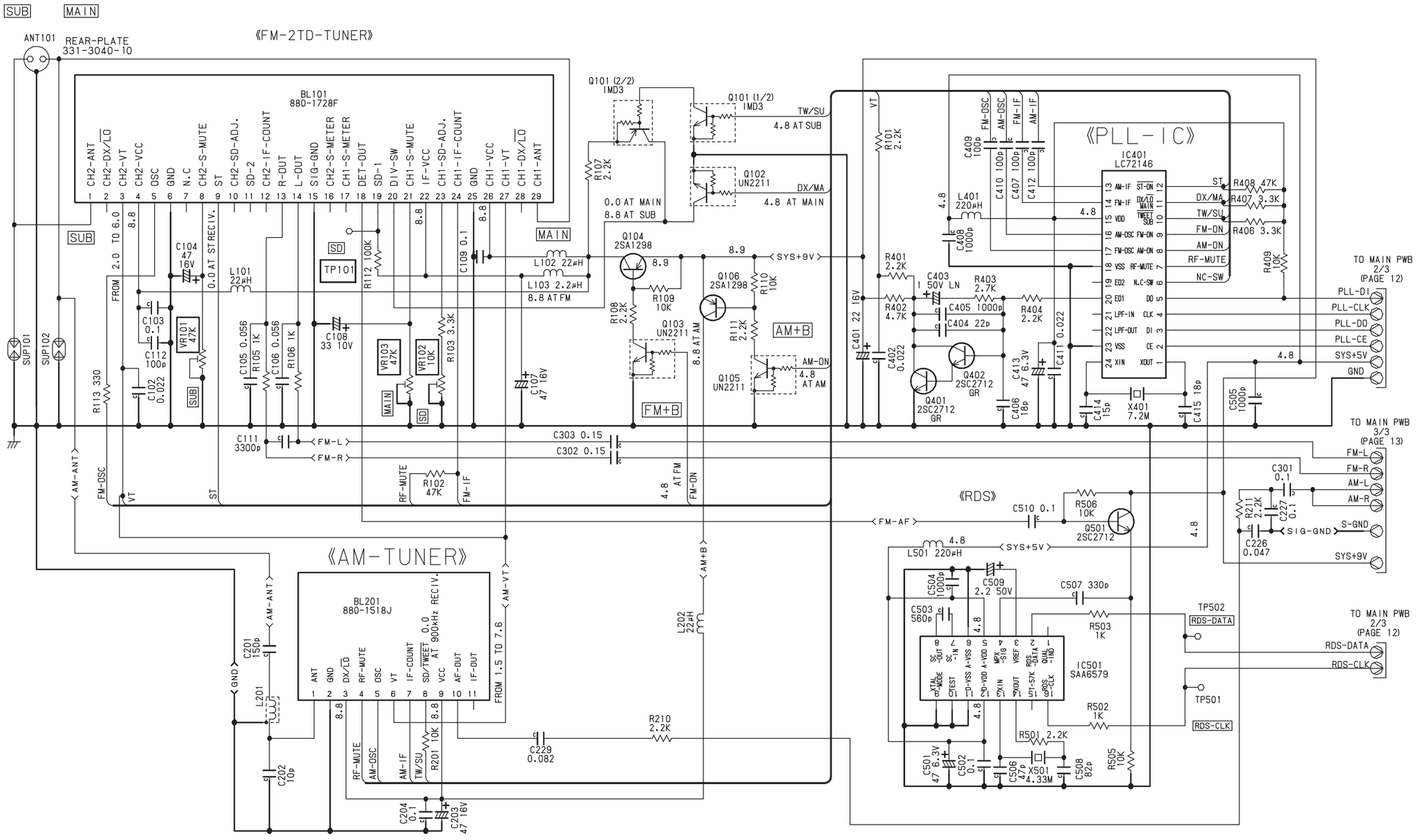
REF No.	PART No.	DESCRIPTION
SW1	013-3906-00	TAPE-DETECT

CIRCUIT DIAGRAM

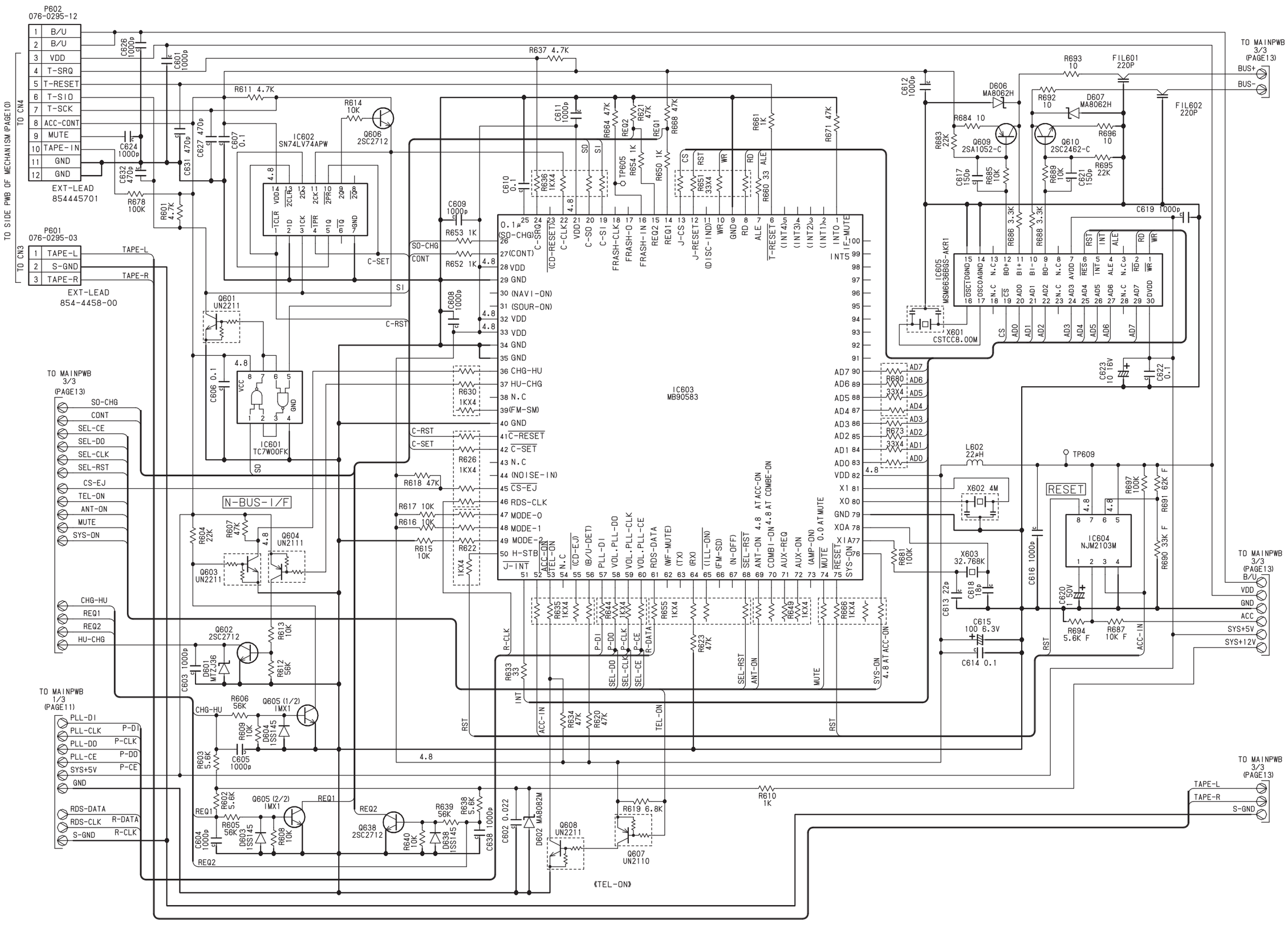
Sub PWB section(B1)



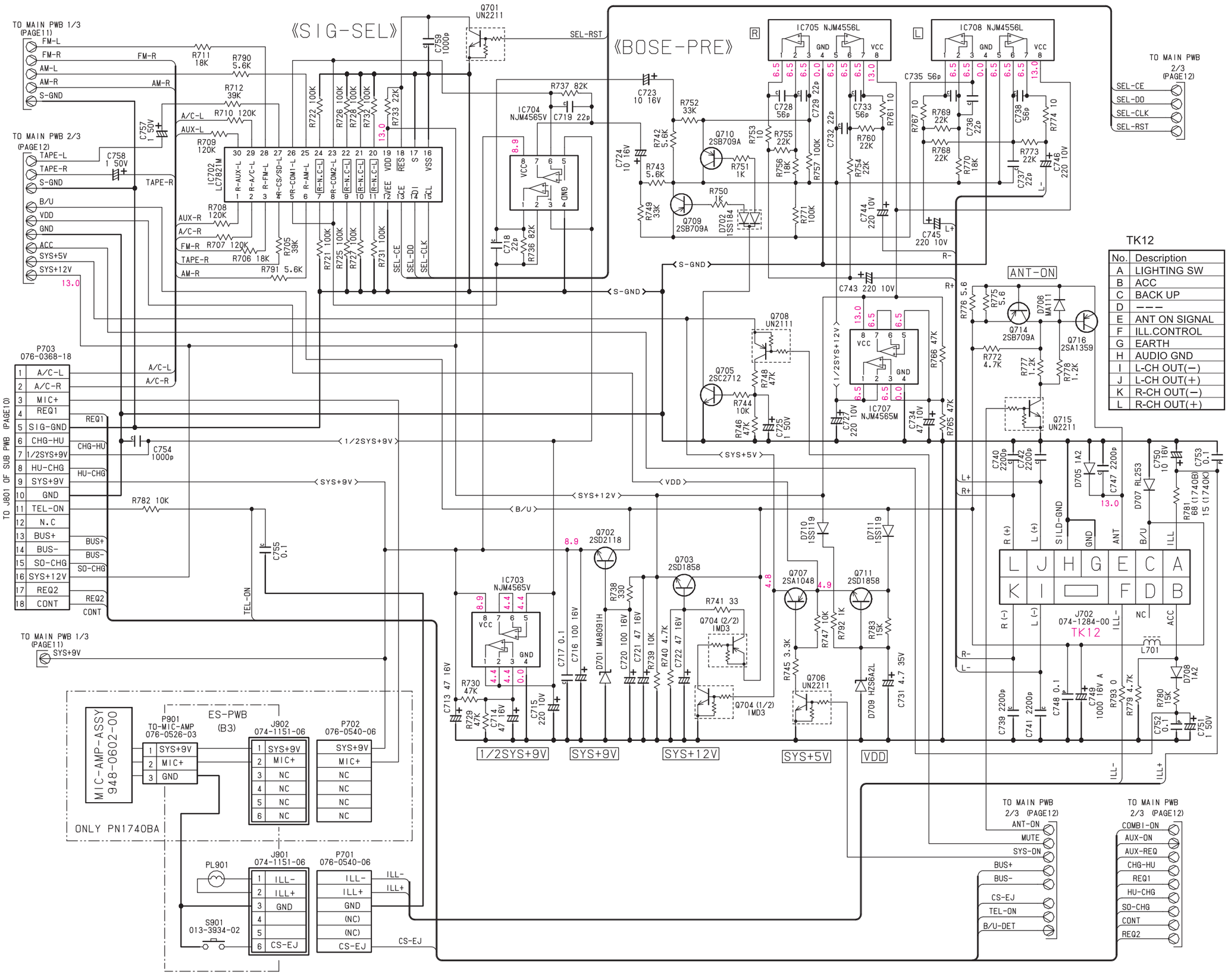
Main PWB section 1/3 (B2)



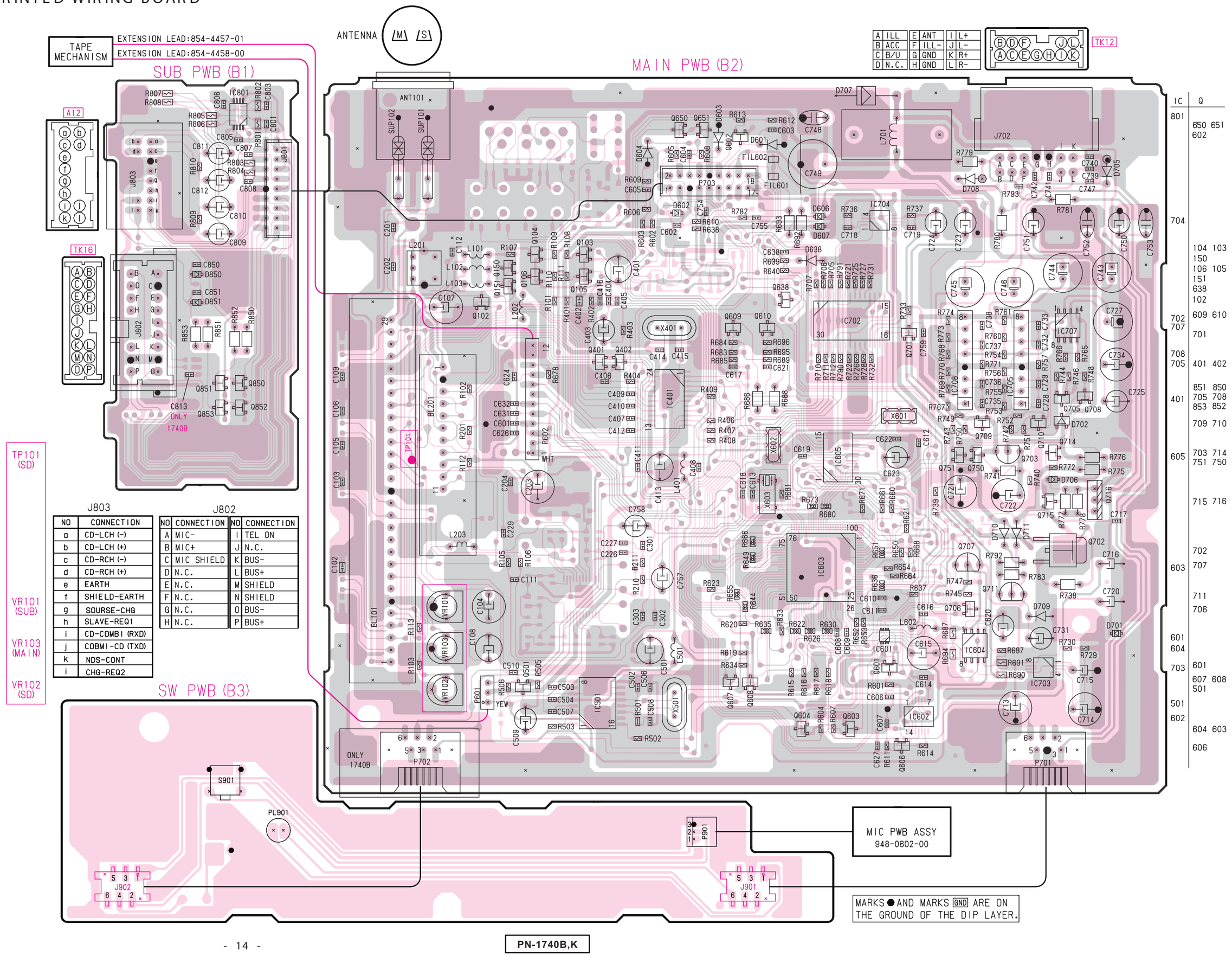
Main PWB section 2/3 (B2)



Main PWB section 3/3 (B2) ,Switch PWB section (B3)



■ PRINTED WIRING BOARD



TK12					
A	ILL	E	ANT	I	L+
B	ACC	F	ILL-	J	L-
C	B/U	G	GND	K	R+
D	N.C.	H	GND	L	R-

J803

NO	CONNECTION
a	CD-LCH (-)
b	CD-LCH (+)
c	CD-RCH (-)
d	CD-RCH (+)
e	EARTH
f	SHIELD-EARTH
g	SOURSE-CHG
h	SLAVE-REQ1
i	CD-COMBI (RXD)
j	COBMI-CD (TXD)
k	NDS-CONT
i	CHG-REQ2

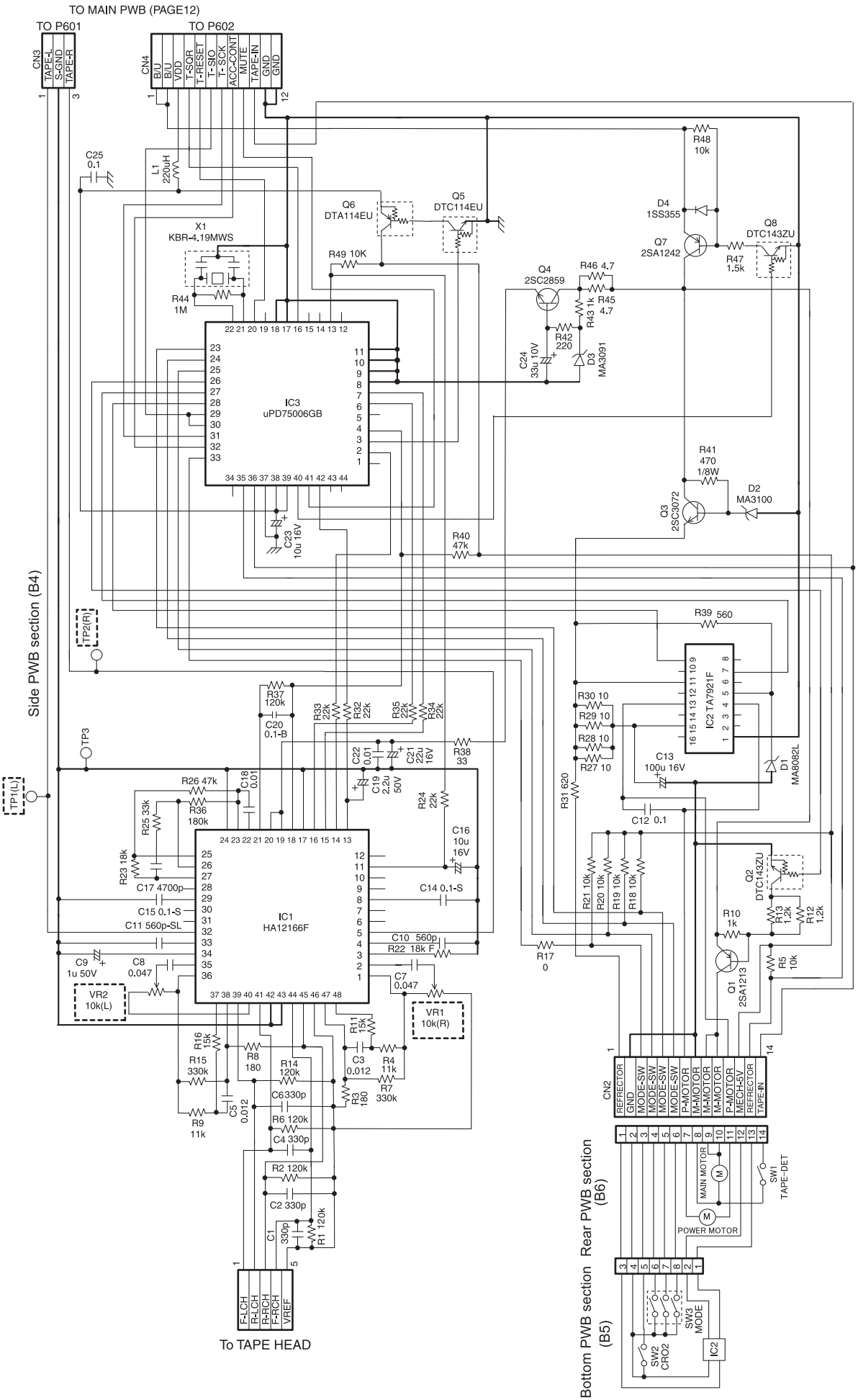
J802

NO	CONNECTION	NO	CONNECTION
A	MIC-	I	TEL ON
B	MIC+	J	N.C.
C	MIC SHIELD	K	BUS-
D	N.C.	L	BUS+
E	N.C.	M	SHIELD
F	N.C.	N	SHIELD
G	N.C.	O	BUS-
H	N.C.	P	BUS+

IC	Q
801	650 651 602
704	104 103 150 106 105 151 638 102
702 707	609 610
708 705	701 401 402
401	851 850 705 708 853 852 709 710
605	703 714 751 750 715 716
702 603	707 711 706
601 604 703	601 607 608 501 501 602 604 603 606

■ CIRCUIT DIAGRAM

Side PWB section(B4),Bottom PWB section(B5),Rear PWB section(B6)



PN-1740B,K

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Tape mechanism section(B4-6)